

REMARKS

Applicant has carefully studied the Office Action of July 13, 2005 and offers the following remarks to accompany the above amendments.

Applicant amends claims 1, 10, 19, and 28 to recite that the transmission is scheduled based on the prioritization factor such that more emphasis is placed on fairness when many users are close to the required data rate and more emphasis is placed on maximizing throughput when all users are far from the required data rate. Support for this amendment can be found at least in the abstract of the application as filed. No new matter is added.

Before addressing the rejections based on the references, Applicant provides a brief summary of the present invention. The present invention is a scheduler for a data network that is designed to measure the rates at which all the users are having data transmitted. These rates are then statistically analyzed and compared to required data rates. If many users are close to the required data rates, that indicates that the transmission medium is relatively congested and the present invention emphasizes fairness in those situations. If the users are above the required data rate, then that is an indication that the transmission medium is not congested. In such a circumstance, the present invention emphasizes maximizing throughput. The present invention thus uses the statistical evidence collected about the data rates to serve as a proxy for the congestion of the transmission medium. Based on this proxy, the present invention makes prioritization decisions in accordance with the tradeoffs enunciated above.

Claims 1, 8, 10, 17, 19, 26, and 28 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl et al. (hereinafter "Bahl") in view of Ketcham. Applicant respectfully traverses. For the Patent Office to establish *prima facie* obviousness, the Patent Office must show where each and every claim element is located in the combination of references. MPEP § 2143.03. If a combination makes a reference unsuitable for its intended purpose, then that fact is evidence of non-obviousness. MPEP § 2143.01.

As amended, independent claims 1, 10, 19, and 28 recite that the transmission is scheduled based on the prioritization factor such that more emphasis is placed on fairness when many users are close to the required data rate and more emphasis is placed on maximizing throughput when all users are far from the required data rate. In contrast, Bahl teaches that its priorities are set based on input rate (see col. 2, lines 55-57). That is, Bahl weights those flows with higher input rates. Alternatively, Bahl teaches that its priorities are based on queue size (see

col. 2, lines 60-61). That is, Bahl weights those flows that have large queue sizes. While Bahl may adaptively weight individual flows based on one or the other criteria (input rates or queue sizes), Bahl never teaches trading fairness for throughput based on the statistical data relating to how close the users are to the required data rate. In fact, if the combination of Bahl and Ketcham did teach this tradeoff between fairness and throughput, then Bahl would no longer serve its intended purpose, which is catering to the flows with the highest input rates/largest queue sizes. That is, Applicant's invention has a different criterion through which to promote fairness and, as amended, the claims capture this criterion. To the extent that Bahl and Ketcham do not teach or suggest this fairness/throughput tradeoff criterion, the combination does not teach or suggest the claim element. Since the combination does not teach or suggest the claim element, the combination does not establish obviousness. Applicant requests withdrawal of the § 103 rejection of claims 1, 8, 10, 17, 19, 26, and 28 at this time.

Claims 2, 11, and 20 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, and further in view of Fawaz et al. (hereinafter "Fawaz"). Applicant respectfully traverses. The standard for establishing obviousness is set forth above.

Applicant initially traverses the rejection for the reasons outlined above. Specifically, Bahl and Ketcham do not teach or suggest the tradeoff between fairness and maximizing throughput recited in the independent claims. The addition of Fawaz does not address this deficiency, and therefore the combination does not establish obviousness.

Applicant further traverses the rejection because Fawaz does not enable the element for which it is cited. That is, while Fawaz may indicate that the service level agreement (SLA) defines minimum bandwidth between packet switches, there is no teaching within Fawaz as to how this minimum bandwidth is effectuated or what happens to the system if the guaranteed bandwidth minimums are not provided. Rather, the SLA of Fawaz is merely a contract between the user and the provider that states that the provider will provide minimum bandwidth, but provides no details as to how the provider effectuates this contract. As such, Fawaz does not teach the claim element for which it is cited. The Patent Office admits that Bahl and Ketcham do not teach or suggest the claim element. Thus, the three references in combination do not teach or suggest the claim element. Since the combination of references does not teach or suggest the claim element, the combination does not establish obviousness. Applicant requests withdrawal of the § 103 rejection on this basis as well.

Claims 3, 12, and 21 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, and further in view of Liao et al. (hereinafter "Liao"). Applicant respectfully traverses. The standard for establishing obviousness is set forth above.

Applicant traverses the rejection for the reasons outlined above. Specifically, Bahl and Ketcham do not teach or suggest the tradeoff between fairness and maximizing throughput recited in the independent claims. The addition of Liao does not address this deficiency, and therefore the combination does not establish obviousness.

Claims 4-6, 13-15, and 22-24 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, and further in view of Walton et al. (hereinafter "Walton"). Applicant respectfully traverses. The standard for establishing obviousness is set forth above.

Applicant traverses the rejection for the reasons outlined above. Specifically, Bahl and Ketcham do not teach or suggest the tradeoff between fairness and maximizing throughput recited in the independent claims. The addition of Walton does not address this deficiency, and therefore the combination does not establish obviousness.

Claims 7, 16, and 25 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, in view of Walton, and further in view of Kilkki et al. (hereinafter "Kilkki"). Applicant respectfully traverses. The standard for obviousness is set forth above.

Applicant traverses the rejection for the reasons outlined above. Specifically, Bahl and Ketcham do not teach or suggest the tradeoff between fairness and maximizing throughput recited in the independent claims. The addition of Walton and Kilkki does not address this deficiency, and therefore the combination does not establish obviousness.

Claims 9, 18, and 27 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, in view of Fawaz, and further in view of Walton. Applicant respectfully traverses. The standard for patentability is set forth above.

Applicant initially traverses the rejection for the reasons outlined above. Specifically, Bahl and Ketcham do not teach or suggest the tradeoff between fairness and maximizing throughput recited in the independent claims. The addition of Fawaz and Walton does not address this deficiency, and therefore the combination does not establish obviousness.

Applicant further traverses the rejection because, as explained above, Fawaz does not teach the element for which it is cited. Walton does not cure this deficiency. Since the

references individually do not teach the claim element, the combination does not teach the claim element, and the combination does not establish obviousness.

Applicant requests reconsideration of the rejections in light of the remarks presented herein. Applicant earnestly solicits claim allowance at the Examiner's earliest convenience.

Respectfully submitted,
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